REMARKS

Claims 10-15 are pending in this application. Claims 10 and 14 have been amended. No new matter has been introduced.

Claims 10, 11 and 13-15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Grooms (Int. Application Pub. WO 99/21515) ("Grooms"). This rejection is respectfully traversed.

The claimed invention relates to an implant for cross-pin anterior cruciate reconstruction surgery. As such, amended independent claim 10 recites an "implant for cross-pin anterior cruciate reconstruction surgery" comprising "a proximal end," "a tapered distal end . . . terminating in a pointed tip" and "a transverse eye for receiving a flexible strand to draw said implant into an opening in bone." Amended independent claim 10 further recites that the transverse eye communicates with "longitudinal channels formed on opposite sides of the implant and extending from the transverse eye to the tip in a direction aligned with the longitudinal axis of the distal end." Amended independent claim 10 also recites "a solid cylindrical shaft . . . having a smooth cylindrical outer surface for supporting a graft in said opening in bone, the entire smooth cylindrical surface being parallel to a longitudinal axis of the shaft."

Grooms relates to a "unitary bone implant (200) having at least one rigid, mineralized bone segment (201, 202), which may be machined to include threads, grooves, a driver head, a recess or a symmetric or asymmetric shape, and a flexible, demineralized segment (203), which may also be machined to any desired shape prior to demineralization, or after demineralization." (Abstract).

Grooms does not anticipate the subject matter of claims 10, 11 and 13-15. Grooms fails to disclose, teach or suggest "a solid cylindrical shaft . . . having a smooth

cylindrical outer surface for supporting a graft in said opening in bone, the entire smooth cylindrical surface being parallel to a longitudinal axis of the shaft" as amended independent claim 10 recites. Grooms teaches a "flexible, demineralized segment (203)" which would arguably correspond to the "solid cylindrical shaft" of the claimed invention. However, as illustrated in the drawings and as described in Grooms, demineralized segment (203) is flexible and has a wavy, serpentine configuration, and not "a smooth cylindrical outer surface . . . parallel to a longitudinal axis of the shaft," as in the claimed invention.

In addition, "flexible, demineralized segment (203)" of Grooms is not a "solid cylindrical shaft." Grooms teaches that, once the ends of the implant are covered with rubber stoppers, the "remaining segment of the implant is then demineralized" by exposing the segment "to an acid solution of sufficient strength to leach the minerals from that segment of the bone." (Grooms at pp. 6-7). Accordingly, demineralized segment (203) of Grooms is not and cannot be a "solid . . . shaft," as in the claimed invention, nor does it have "a smooth cylindrical outer surface for supporting a graft in said opening in bone," as amended independent claim 10 recites.

Grooms also fails to disclose, teach or suggest "a transverse eye . . . communicating with longitudinal channels formed on opposite sides of the implant and extending from the transverse eye to the tip in a direction aligned with the longitudinal axis of the distal end," as claim 10 recites. Grooms does not disclose or illustrate any channels in communication with an eye, much less in communication with a transverse eye.

In the December 5, 2006 Office Action, the Examiner asserts that "Grooms also teaches the use of channels formed on opposite sides of the implant shown as the channels in figure 7D that may accommodate suture received in the eye of the implant."

(December 5, 2006 Office Action at 2). Applicants submit that Figure 7D of Grooms illustrates a cross-shaped cross-section for the demineralized segment of the implant. Figure 7D of Grooms does not illustrate, however, a transverse eye that communicates with "longitudinal channels formed on opposite sides of the implant and extending from the transverse eye to the tip in a direction aligned with the longitudinal axis of the distal end," as in the claimed invention. The shaft illustrated in Figure 7D of Grooms is also not a "cylindrical shaft," much less a "cylindrical shaft . . . having a smooth cylindrical outer surface for supporting a graft in said opening in bone, the entire smooth cylindrical surface being parallel to a longitudinal axis of the shaft," as in the claimed invention. For at least these reasons, Grooms fails to anticipate the subject matter of claims 10, 11 and 13-15, and withdrawal of the rejection of these claims is respectfully requested.

Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Grooms in view of Grooms et al. (U.S. Patent No. 6,045,554) ("Grooms '554"). This rejection is respectfully traversed.

Claim 12 depends on amended independent claim 10 and recites that "the implant is formed of synthetic bone material."

Grooms '554 relates to an interference screw provided "by machining a fragment of autograft or allograft cortical bone from a donor or from a recipient's amputated bone." (Abstract). Grooms '554 teaches that the interference screw "has a machined pointed, rounded or flush end and an opposite machined end which mates with a drive means, and has advantages over conventional interference screws known in the art in that subsequent to implantation, no residual hardware that must later be removed remains at the implant site." (Abstract).

The subject matter of claim 12 would not have been obvious over Grooms in view of Grooms '554. None of the cited references, considered alone or in combination, discloses, teaches or suggests the subject matter of amended independent claim 10 and of dependent claim 12. As noted, Grooms is silent about "a solid cylindrical shaft . . . having a smooth cylindrical outer surface for supporting a graft in said opening in bone, the entire smooth cylindrical surface being parallel to a longitudinal axis of the shaft," as amended independent claim 10 recites. Grooms is also silent about "a transverse eye . . . communicating with longitudinal channels formed on opposite sides of the implant and extending from the transverse eye to the tip in a direction aligned with the longitudinal axis of the distal end," as amended independent claim 10 recites.

Grooms '554 fails to rectify the deficiencies of Grooms. Grooms '554 does not disclose, teach or suggest all limitations of amended independent claim 10. Grooms '554 teaches an interference screw formed from a machined fragment of cortical bone, and not an "implant for cross-pin anterior cruciate reconstruction surgery" having "a tapered distal end . . . terminating in a pointed tip" and "a transverse eye for receiving a flexible strand to draw said implant into an opening in bone, said transverse eye extending completely through said tapered distal end in a direction transverse to the longitudinal axis of the distal end," as claim 10 recites. Grooms '554 is also silent about "a solid cylindrical shaft . . . having a smooth cylindrical outer surface for supporting a graft in said bone, the entire smooth cylindrical surface being parallel to a longitudinal axis of the shaft," as in the claimed invention. As illustrated in FIG. 5D of Grooms '554, the screw after machining is provided with "screw thread 22," and not with "a smooth cylindrical outer surface," as recited in claim 10. For at least these reason, the Office Action fails to establish a *prima facie* case of obviousness, and withdrawal of the rejection of claim 12 is also respectfully requested.

Allowance of all pending claims is solicited.

Dated: March 5, 2007

Respectfully submitted,

By _____

Stephen A. Soffen
Registration No.: 31,063
Gabriela I. Coman
Registration No.: 50,515
DICKSTEIN SHAPIRO LLP
1825 Eye Street, NW
Washington, DC 20006-5403
(202) 420-2200
Attorneys for Applicants